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| 10/666,319 | 09/19/2003 | Robert Edward Wilson | 10030442-1 | 7914 |
| 57299 | 7590 | 10/02/2009 | | |
| Kathy Manke Avago Technologies Limited 4380 Ziegler Road Fort Collins, CO 80525 | | | EXAMINER CHIEH, DINH D | |
| | | | ART UNIT 2883 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/666,319

Applicant(s)

WILSON ET AL.

Examiner

ERIN D. CHIEM

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

This office action is in response to applicant's argument filed on July 31, 2009.

Currently claims 1-5 and 7-9 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Boscha (US 2002/0136504 A1). Boscha discloses an optical assembly (Fig. 1) comprising a package including an optoelectronic component (28); an alignment feature (24) mounted to the surface of the package (28); and a sleeve (23b) defining only one bore with an inner surface having a constant inner diameter for receiver and contacting outer surfaces of the alignment feature (24) and a ferrule (23a) of a fiber connector (30) when the alignment feature and the ferrule are inserted into the bore at opposite ends of the bore so they can be aligned relative to each other.

Regarding claim 2, Boscha discloses an optical assembly comprising a package including an optoelectronic component (28); an alignment feature (24) mounted to a surface of the package; a sleeve (23b) defining only one bore with an inner surface having a constant inner diameter; a fiber optic connector comprising a ferrule (23a); wherein the alignment feature (24)

and the ferrule are inserted into the bore at opposite ends of the bore so they can be aligned relative to each other. Regarding the limitation a fiber optic connector, the examiner shall interpret in accordance to applicant's remark that the ferrule (23a) together with the optical fiber forms a fiber optic connector.

Regarding claim 3, the examiner considers the glass ferrule (23a) to be a cylindrical post having a hole allowing a light emitted by the package to pass through since the cylindrical post passively aligns the optical signal between the package and the fiber by forming a tight fit around the convex lens (22) and the a tight fit around the optical fiber (30).

Regarding claim 5, the solid partial sphere is disclosed by Boscha convex lens (22). The convex section protrudes from the solid substrate of the microlens (20), forming half of a sphere.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boscha in view of Gilliland et al.(US 6,416,238 B1). Boscha disclose the invention of claim 1, however, Gilliland does not disclose the alignment feature comprises a solid post comprising a transmissive material allowing a light emitted by the package to pass through. Gilliland discloses in Fig. 2 element 20 a transparent solid post which is mounted on the substrate (48) acting as a passive alignment feature wherein the sleeve 34 having a bore hole makes contact with the outer surfaces of the

alignment feature. The light from the optoelectronic substrate would be transmissive through the transparent solid post (20). It would have been obvious to one having ordinary skill in the art to recognize the disclosure of Gilliland would be modifiable to the art of Boscha since they both are in the same field of endeavor. **The motivation** a solid transmissive post would have been to make the device cost effective since the design is not greatly concerned with confining light in a certain transmission wavelength of mode but only rather a light relaying means in which a solid post (20) as disclosed by Gilliland can be performed that would cost less than a refined collimating lens.

Claims 7 -9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boscha in view of Freeman (US 5,195,156). Boscha discloses the invention of claim 2, however, Boscha does not disclose:

- An optical connector selected from the group consisting of an LC, ST, SC, and FC connector
- The package is selected from a group consisting of an optoelectronic chip enclosure and a TO-can (transistor outline can).
- The optoelectric component is a laser.

Freeman discloses the state of the art at the time of Freeman's invention utilizes the laser optoelectronic package in an ST type connector. Therefore, it would have been obvious to one having ordinary skill in the art to recognize Freeman's disclosure would be modifiable in the art of Boscha since **the motivation** would be to provide an optoelectronic device that is capable of coupling with a standardized connector type such that the device may be universally apply in any application which requires an ST, SC, FC, or LC type connector. Well known standardized

connector types are ST, SC, FC, LC etc. Please refer to Gruber Industries cable c connector reference page (<http://www.arcelect.com/fibercable.htm>). Furthermore Freeman also discloses an optoelectronic chip enclosure (Fig. 2) and the optoelectronic is chosen from a group of LED (light emitting diode). It would have been obvious to one having ordinary skill in the art to recognize the disclosure of Freeman is modifiable in the art of Boscha since optoelectronic chip enclosure and light emitting diode are well-known optical elements which are involved in the design of an optoelectronic device such as one disclosed by Boscha. Furthermore the difference between a photodiode and a light emitting diode is the flow of current; thus one having ordinary skill can easily modify a light detector with a light emitting and vice versa.

Response to Arguments

Applicant's arguments filed July 31, 2009 have been fully considered but they are not persuasive.

Applicant argues that Boscha does not teach each and element of claims 1 and 2. The examiner clarified in the rejection above. The examiner respectfully point out Boscha Figure 1A wherein the sleeve is reference number 23b, the ferrule of a fiber connector is 23a, and the alignment feature is 24. Please see the rejection above for detail function of each and every element of claims 1 and 2.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **ERIN D. CHIEM** whose telephone number is (571)272-3102. The examiner can normally be reached on Monday - Thursday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Erin D Chiem/
Patent Examiner, Art Unit 2883

/Frank G Font/
Supervisory Patent Examiner, Art Unit 2883

FGF/edc